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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/708,663	03/18/2004	Masuhiko Natsuhara	39.035	2662
29453	7590	06/30/2005	EXAMINER	
JUDGE PATENT FIRM RIVIERE SHUKUGAWA 3RD FL. 3-1 WAKAMATSU-CHO NISHINOMIYA-SHI, HYOGO, 662-0035 JAPAN			PAIK, SANG YEOP	
			ART UNIT	PAPER NUMBER
			3742	

DATE MAILED: 06/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/708,663

Applicant(s)

NATSUHARA ET AL.

Examiner

Sang Y. Paik

Art Unit

3742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-5, 8-10 and 13-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Ito (WO 02/084717).

Ito shows a ceramic susceptor formed of a laminate of ceramic sheets, a concentric circular resistive heating elements formed on one surface of the laminate, a lead circuit formed on another surface such that the lead circuit and heating elements are formed on the different surfaces with an electrical junction between the heating element and the lead circuit (also see Figure 10).

Ito further shows that the ceramic susceptor is made of aluminum nitride as well as aluminum carbide with the thickness of .5 mm to 25 mm.

With respect to claim 5, the claimed temperature uniformity, which is the property or function, is inherently met by Ito having the substantially same or identical to that of the claimed structure.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

Art Unit: 3742

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-5 and 8-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burkhart et al (US 6,469,283) in view of Ito et al (WO 02/084717) or Kawanabe et al (US 6,133,557).

Burkhart shows the ceramic susceptor claimed having a retaining side, a plurality of concentric circular heating elements providing a plurality of discrete heating zones formed in the ceramic susceptor, and a lead circuit formed on a different plane or surface than the surface on which the heating elements are provided. However, Burkhart does not show the claimed laminate composed of a plurality of ceramic sheets.

Ito and Kawanabe show that it is known in the art to make a ceramic susceptor comprising a plurality of ceramic sheets to make the ceramic susceptor with the heating elements and the electrical connections provided in the ceramic susceptor to provide an uniform heating surface. Ito further shows the electrical junction, and Kawanabe further shows that the susceptor is made of aluminum nitride with the sintering aids including yttrium in .001 to 1 wt %.

In view of Ito and Kawanabe, it would have been obvious to one of ordinary skill in the art to adapt Burkhart with the ceramic susceptor made of the laminate of the plurality of ceramic sheets to make a thermally stable ceramic substrate that can withstand a high temperature and also to provide a uniform heating across its heating surface.

5. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Burkhart in view of Ito or Kawanabe as applied to claims 1-5 and 8-15 above, and further in view of Kojima et al (US 4,733,056) or Nozaki et al (US 5,264,681).

Art Unit: 3742

Burkhart in view of Ito or Kawanabe shows the susceptor claimed except the lead circuit having smaller resistance than the heating circuit.

Kojima and Nozaki show it is well known in the art to having a lead circuit or lead wire having a resistance made smaller than the heating element so that heat is not generated in the lead circuit. In view of Kojima or Nozaki, it would have been obvious to one of ordinary skill in the art to adapt Burkhart, as modified by Ito and Kawanabe, with the lead circuit having less resistance than the heating element to provide the current without generating substantial heat along the lead circuit.

6. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Burkhart in view of Ito or Kawanabe as applied to claims 1-5 and 8-15 above, and further in view of Yamaguchi et al (US 6,376,811) or Soma et al (US 5,231,690).

Burkhart in view of Ito or Kawanabe shows the susceptor claimed except the electrodes formed in the center of the susceptor and connected to the lead circuit.

Yamaguchi shows the electrodes (8, 9) provided in the center of the heating device and connected to the lead circuit (5, 6). Soma shows the lead circuits that can be formed on the peripheral region as well as in the center region of a heating device with the leads extending to form the electrodes. In view of Yamaguchi or Soma, it would have been obvious to one of ordinary skill in the art to adapt Burkhart, as modified by Ito and Kawanabe, to form the electrodes in the center of the susceptor to route the lead circuits and corresponding electrodes as an alternative arrangement to conveniently make the electrical power connection to the heating elements.

Response to Arguments

7. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ito (EP 1 391 919) is an equivalent English translation application of the applied Ito (WO 20/084717) application.

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

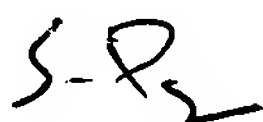
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sang Y. Paik whose telephone number is 571-272-4783. The examiner can normally be reached on M-F (9:00-4:00) First Friday Off.

Art Unit: 3742

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on 571-272-4777. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sang Y Paik
Primary Examiner
Art Unit 3742

syp